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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/858,433	05/16/2001	Hiroyuki Kawakami	P/2238-28	3473

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EXAMINER	
CHOUDHURY, AZIZUL Q	

ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 11/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/858,433	KAWAKAMI, HIROYUKI	
	Examiner	Art Unit	
	Azizul Choudhury	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☒ Claim(s) *2,10,13 and 19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Claim Objections

Claims 2, 10 and 19 are objected to because of the following informalities:

- The term "VNP" is believed to be a misspelling. It should state "VPN". Appropriate correction is required.

Claim 13 is objected to because of the following informalities:

- The term "accoding" is believed to be a misspelling. It should state, "according". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Beser et al (US Pat No: US006496867B1), hereafter referred to as Beser.

1. With regards to claims 1, 9 and 18, Beser teaches an edge communication system establishing a virtual private network for communication between a plurality of customer networks by forming a tunnel on a provider network, said edge communication device being connected at input and output ends of said tunnel, said edge communication device comprising terminating means for terminating a routing protocol used in said customer network (Beser's disclosure teaches how a VPN is sometimes created through tunneling (column 2, lines 1-17, Beser). In addition, Beser describes a design that tunnels with the use of edge devices (column 4, lines 18-29, Beser). The edge devices are routers and they have means by which to terminate connections (column 11, lines 45-58, Beser)).

2. With regards to claims 2, 10 and 19, Beser teaches an edge communication device which further comprises a table composed of VPN establishment information relating to said virtual private network and correspondence information of ports connected to said provider network and preliminary assigned capsule addresses and IP addresses of each communication device on said customer network side, said terminating means includes retrieving means for

retrieving said table from a destination address of a packet input from said customer network and encapsulating means for encapsulating said packet on the basis of retrieved capsule address for feeding to said provider network (Beser describes a design with a database of IP addresses that is used for terminating connections with (column 11, lines 45-58, Beser)).

3. With regards to claims 3, 11 and 20, Beser teaches an edge communication device wherein said encapsulating means encapsulates a control packet on the basis of said capsule address for other customer network belonging on the same virtual private network (Beser describes a design that allows for tunneling (Figure 4, Beser). With tunneling means present, it is inherent that encapsulating means are also present since tunneling requires the use of encapsulation).

4. With regards to claim 4, Beser teaches an edge communication device wherein said terminating means includes means for receiving and decoding said control packet generated in said customer network and means for updating data of said table according to the result of the decoding (In a network using packets, such as Beser's, it is inherent that the packets are decoded for network transport information (such as IP information), otherwise they would not be handled properly. This is also true since the edge device handling the data packets is an edge router within Beser's design (column 4, lines 18-29, Beser). In addition, since the design uses the database with IP information for termination of

connections, it is also inherent that the database is updatable with the latest IP information. Otherwise the proper terminations may not be possible).

5. With regards to claims 5, 12 and 21, Beser teaches an edge communication device wherein said terminating means includes means for removing capsule containing said capsule address for the packet arriving from said provider network to own device, and determining destination referring to said table on the basis of a destination IP address contained in said packet for feeding (Beser describes a design with a database of IP addresses that is used for terminating connections with (column 11, lines 45-58, Beser). When a data packet is received, its destination must be determined in order for the packet to be processed properly. Hence the claimed step of removing the capsule address for the packet (otherwise known as retrieving the header information) must be performed in a design such as Beser's).

6. With regards to claims 6, 14 and 23, Beser teaches an edge communication device wherein said terminating means includes means for erasing information relating to faulty interface in response to failure of a working interface for said customer network and for notifying failure to other relevant edge communication devices and use of a reserved interface (Beser describes a design with a database of IP addresses that is used for terminating connections with (column 11, lines 45-58, Beser). When a connection is terminated, it is inherent that the

information that is not necessary anymore (such as the claimed information relating to faulty interface) is erased from the database (table). If this is not done, the database will become quickly obsolete due to filling up with unnecessary information).

7. With regards to claims 7, 15 and 24, Beser teaches an edge communication device wherein said terminating means includes means for erasing information in said table relating to said faulty interface in response to failure notice from other edge communication device and adding information relating to said reserved interface in said table in response to a notice of use of said reserved interface (Beser describes a design with a database of IP addresses that is used for terminating connections with (column 11, lines 45-58, Beser). When a connection is terminated, it is inherent that the information that is not necessary anymore (such as the claimed information relating to faulty interface) is erased from the database (table). If this is not done, the database will become quickly obsolete due to filling up with unnecessary information. In addition, the database must also be updatable to account for all the connections being made through tunneling).

8. With regards to claims 8, 16 and 25, Beser teaches an edge communication device wherein the routing protocol used in said customer network is an open shortest path first protocol (The open shortest path first protocol is an IP protocol

used by routers. Beser's design makes use of routers (column 4, lines 18-29, Beser) that use IP protocol. No limitations are placed within the design regarding the types of IP protocols that are used by the routers and hence the claimed protocol is acceptable within the design disclosed by Beser).

9. With regards to claims 13 and 22, Beser teaches a communication control method wherein said terminating step includes step of receiving and decoding said control packet generated in said customer network in response to adding IP address or modifying topology in said customer network, and updating data of said table according to the result of decoding (Beser describes a design with a database of IP addresses that is used for terminating connections with (column 11, lines 45-58, Beser). When a connection is terminated, it is inherent that the information that is not necessary anymore (such as the claimed information relating to faulty interface) is erased from the database (table). If this is not done, the database will become quickly obsolete due to filling up with unnecessary information. In addition, the database must also be updatable to account for all the connections being made through tunneling). Furthermore, the design makes use of routers as the edge device and the routers must read at least the packet headers to understand how to handle the packets properly. When new packets come into the network or the network is changed (updated topology), the packets inherently must be read as claimed and the routing tables and databases must

also be updated to reflect such changes. Such steps are performed in all networks with routers).

10. With regards to claim 17, Beser teaches a communication control method wherein a concentrated processing unit for concentrically managing said table is provided and said communication control method comprises: step of uploading an updated table to said concentrated processing unit after updating data of said table according to a result of decoding of said control packet and step of downloading the table uploaded from said concentrated processing unit to the relevant edge communication device (Beser's design makes use of routers (column 4, lines 18-29, Beser). Routers have to read the header information of data packets and update their routing tables with that information. In addition, the routers of Beser's design also maintain information in a database that is used when making terminations (column 11, lines 45-58, Beser). Routers perform the claimed steps. In addition, all routers posses processing units by which to process such tasks with).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Azizul Choudhury whose telephone number is (571) 272-3909. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AC

BUNJOB JAROENCHONWANIT
PRIMARY EXAMINER